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a plurality of processors for executing a series of processings on data to be processed, in a prescribed order; and

a memory for storing said data to be processed in association with state information to represent the processing state of said data, wherein

processings executed by said plurality of processors are asynchronously executed and said plurality of processors share said memory.

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3. (Amended) The data processing system according to claim 2, wherein said plurality of processors each execute a processing on said data to be processed, and then rewrite said state information corresponding to the processed data.

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5. (Amended) The data processing system according to claim 4, wherein said first controller rewrites said state information corresponding to processed data in response to the completion of each processing by said plurality of processors.

6. (Amended) The data processing system according to claim 1, further comprising a second controller for determining an attribute of said data to be processed, wherein

said second controller rewrites said state information corresponding to said data to be processed in order to change the order of executing said series of processings if it is determined that said data to be processed has a prescribed attribute.

A17 Cont C1
8. (Amended) The data processing system according to claim 1, wherein said memory has one region to store said state information corresponding to a single region where said data to be processed is stored.

9. (Amended) The data processing system according to claim 1, wherein said memory has one region to store said state information corresponding to a plurality of regions where said data to be processed is stored.

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11. (Amended) A data processing system, comprising:
a plurality of processing means for executing a series of processings on data to be processed, in a prescribed order; and
memory means for storing said data to be processed in association with state information to represent the processing state of said data, wherein
processings executed by said plurality of processing means are executed asynchronously, and said plurality of processing means share said memory means.

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13. (Amended) The data processing system according to claim 12, wherein said plurality of processing means each execute a processing on said data to be processed and then rewrite said state information corresponding to the processed data.

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15. (Amended) The data processing system according to claim 14, wherein

A20 Cont C1
said first control means rewrites said state information corresponding to processed data in response to the completion of each processing by said plurality of processing means.

16. (Amended) The data processing system according to claim 11, further comprising a second control means for determining an attribute of said data to be processed, wherein

if it is determined that said data to be processed has a prescribed attribute, said second control means rewrites said state information corresponding to said data to be processed in order to change the order of executing said series of processings.

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18. (Amended) The data processing system according to claim 11, wherein said memory means has one region to store said state information corresponding to a single region where said data to be processed is stored.

19. (Amended) The data processing system according to claim 11, wherein said memory means has one region to store said state information corresponding to a plurality of regions where said data to be processed is stored.

Add the following new claims:

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21. (New) The data processing system of claim 1 wherein a given data item is stored at the same location in said memory after each of said plurality of processings is performed on said given data item.

22. (New) The data processing system of claim 21 wherein the state information for said given data item is stored at the same location in said memory after each of said plurality of processings is performed on said given data item.

23. (New) The data processing system of claim 11 wherein a given data item is stored at the same location in said memory means after each of said plurality of processings is performed on said given data item.

24. (New) The data processing system of claim 23 wherein the state information for said given data item is stored at the same location in said memory means after each of said plurality of processings is performed on said given data item.